CLAIMS

1. (amended) A solid oxide fuel cell comprising:

an anode, a cathode and a first solid oxide held between the anode and the cathode;

wherein the anode includes metal particles, an anode catalyst and ion conducting bodies;

wherein the anode catalyst is attached to the surface of the metal particles;

wherein the composition of the metal particles and the composition of the anode catalysts differ; and

wherein the average particle diameter of the metal particles is larger than the average particle diameter of the anode catalysts.

2. (cancelled)

3. The solid oxide fuel cell according to claim 1,

wherein the anode catalyst includes at least one element selected from Pt, Ir, Rh, Pd, Ag and Au.

4. The solid oxide fuel cell according to claim 1,

wherein the anode catalyst includes at least one alloy selected from PtRu, PtSn, PtRe, PtOs, PtW, IrRu, IrSn and IrW.

5. The solid oxide fuel cell according to claim 1,

wherein the average particle diameter of the anode catalyst is in a range of 2 nm to 400 nm.

6. The solid oxide fuel cell according to claim 1,

wherein the metal particles include at least one element selected from Ni, Co and Fe.

7. (cancelled)

8. The solid oxide fuel cell according to claim 1,

wherein the ion conducting bodies are a second solid oxide.

9. The solid oxide fuel cell according to claim 8,
wherein the second solid oxide includes Ce.

10. The solid oxide fuel cell according to claim 9,
wherein the second solid oxide has a composition expressed by the formula $Ce_{1-x}M_xO_{2-\alpha}$,
where, M is at least one element selected from Gd, La and Sm, and x and α are values satisfying the following relationships: $0 < x < 1$ and $0 \leq \alpha < 2$.

11. The solid oxide fuel cell according to claim 9,
wherein the second solid oxide has a composition expressed by the formula $Ba(Zr_{1-x'}Ce_{x'})_{1-y'}Gd_{y'}O_{3-\alpha}$,
where, x', y' and α are values satisfying the following relationships: $0 < x' < 1$, $0 < y' < 1$ and $0 \leq \alpha < 3$.

12. The solid oxide fuel cell according to claim 8,
wherein the second solid oxide has a composition expressed by the formula $La_{x''}Sr_{1-x''}Ga_{y''}Mg_{1-y''-z}Co_zO_{3-\alpha}$,
where, x", y", z and α are values satisfying the following relationships: $0 < x'' < 1$, $0 < y'' < 1$, $0 < z < 1$ and $0 < \alpha < 3$.

13. The solid oxide fuel cell according to claim 8,
wherein the composition of the first solid oxide and the composition of the second solid oxide differ from one another.

14. (cancelled)

15. (cancelled)

16. (cancelled)

17. A method for manufacturing a solid oxide fuel cell comprising an anode containing an anode catalyst, a cathode, and a first solid oxide held between the anode and the cathode, the method comprising:
(i) a step of forming metal particles to which an element is attached, by adding the metal particles to a first solution that contains a compound of

the element that becomes the anode catalyst, and then reducing the compound to deposit the element on the surface of the metal particles;

(ii) a step of forming a thin membrane that contains the metal particles and ion conducting bodies; and

(iii) a step of forming the anode containing the anode catalyst from the thin membrane, by disposing the thin membrane, the cathode, and the first solid oxide such that the first solid oxide is held between the thin membrane and the cathode, to form a laminated body, and heating the laminated body thus formed.

18. The method for manufacturing a solid oxide fuel cell according to claim 17,

wherein the ion conducting bodies are a second solid oxide.

19. The method for manufacturing a solid oxide fuel cell according to claim 17,

wherein the compound of the element that becomes the anode catalyst is at least one selected from chloroplatinic acid, ruthenium chloride, tin acetate, tungstic acid, sodium hexachloroiridate, rhodium chloride, palladium nitrate, silver acetate and chloroauric acid.

20. The method for manufacturing a solid oxide fuel cell according to

claim 17,

wherein the metal particles include at least one element selected from Ni, Co, and Fe.

21. The method for manufacturing a solid oxide fuel cell according to claim 18,

wherein the step (ii) includes a step (a) of forming a thin membrane containing the metal particles and the second solid oxide, by adding the metal particles to a second solution containing the compound of the element that becomes the second solid oxide, and removing the solvent in the second solution, and then performing heating.

22. The method for manufacturing a solid oxide fuel cell according to claim 21,

wherein the compound of the element that becomes the second solid oxide is at least one selected from cerium acetate, lanthanum chloride, samarium chloride, barium acetate, zirconium sulfate and gadolinium chloride.

23. A method for manufacturing a solid oxide fuel cell comprising an anode containing anode catalyst, a cathode, and a first solid oxide held between the anode and the cathode, the method comprising:

(I) a step of forming metal particles to which an element is attached by adding the metal particles to a solution that contains a compound of the element that becomes the anode catalyst, and then reducing the compound to deposit the element on the surface of the metal particles;

(II) a step of forming a thin membrane that contains the metal particles and ion conducting bodies;

(III) a step of forming the anode containing the anode catalyst from the thin membrane by heating the thin membrane; and

(IV) a step of laminating the anode, the cathode, and the first solid oxide such that the first solid oxide is held between the anode that is formed and the cathode.